

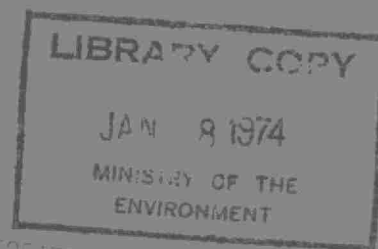
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OPERATING SUMMARY

TD227
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1972
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DESERONTO



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Ontario

Ministry of the
Environment

135 St. Clair Avenue West
Toronto 195, Ontario

We are pleased to present you with the 1972 operating summary for the water pollution control plant serving your community.

This summary contains data on the performance of the plant as well as relevant financial information. Of particular interest is the review of the year's activities in which significant items of these data are discussed in some detail by the operations engineer and his staff who, by their day-to-day involvement with the operation, are thoroughly familiar with the plant.

We appreciate your continuing interest in protecting the environment through the efficient operation of this wastewater treatment facility.

D.S. Caverly,
Assistant Deputy Minister.

D.A. McTavish, P. Eng.,
Director,
Project Operations Branch.

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DESERONTO

WATER POLLUTION CONTROL PLANT

MINISTRY OF THE ENVIRONMENT

1972 ANNUAL OPERATING SUMMARY



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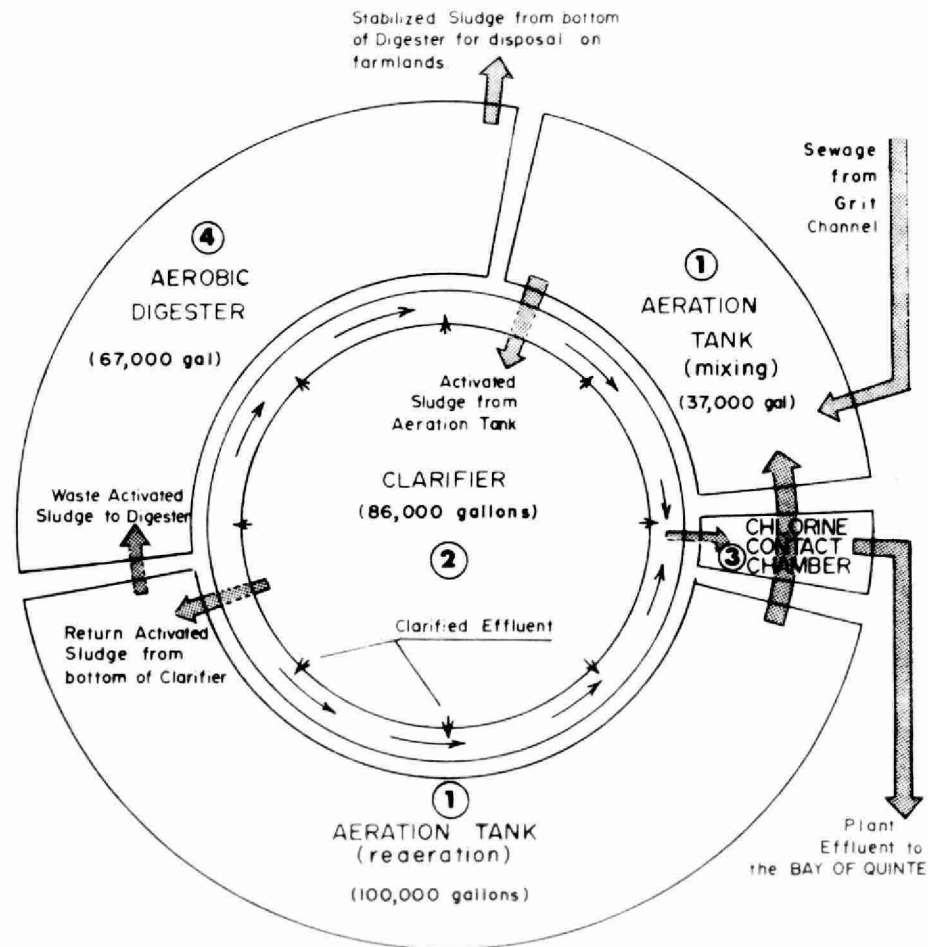
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DESIGN DATA



DESIGN DATA

FLOW	300,000 gallons per day		
BOD	197 mg/l	REMOVAL	90%
SS	224 mg/l		
POPULATION	2,800		

'72 Review

GENERAL

The Deseronto Water Pollution Control Plant has the capacity of 300,000 gallons per day. Although the plant was completed in the fall of 1971, it was not until early in 1972 that the plant officially commenced operation. This was considerably influenced by the start-up of the three pumping stations in February of 1972.

The water pollution control plant was constructed by Ruliff Grass Limited. For a project of this nature, there were very few deficiencies found after the contractor had completed the project. The only real equipment problem experienced was in the early spring of 1972 when the gear box on the clarifier became noisy. This was repaired by Napanee Industries in June 1972. In October 1972, the same gear box again caused difficulties and it was replaced by a new and heavier duty gear box. Since this modification, there have been no operating problems in respect to the clarifier mechanism. In July of 1972, Napanee Industries also installed an influent trough at the treatment plant to allow the unit to be operated by both the extended aerated principle and the contact stabilization principle.

Because of the small flow in some of the smaller sewer lines in the Town of Deseronto, it has been necessary to flush these lines with a fire hose to keep them clear and operating. In January of 1972, when the temperature dropped below 20 degrees below zero, the clarifier accumulated one inch of ice which created operating problems. The #3 blower motor also caused difficulty and a new set of bearings was installed in the motor by Napanee Industries.

EXPENDITURES

The annual operating cost for the water pollution control plant was \$40,499.73. This operating cost was naturally high due to the initial cost of equipment purchases for rather large items.

PLANT EFFICIENCY

Data collection was commenced during the month of April and May. During the subsequent months, the average daily flow to the sewage treatment plant was 108,000 gallons per day. The average BOD and suspended solids concentrations in the raw sewage were 153 and 264 mg/l respectively. The effluent BOD and suspended solids in the effluent were 3 and 10 mg/l respectively. The influent BOD and suspended solids concentrations are average values for wastes that are largely domestic in nature such as the Town of Deseronto. The effluent quality is exceptionally good and well below the Ministry of the Environment's objectives.

Two plant operators were hired for the operation of the water pollution control plant. The chief operator hired was Mr. H. Bennett and the operator hired was Mr. B. Kimmett. The plant staff have operated the water pollution control plant in a very satisfactory manner and their efforts should be commended.

CONCLUSION

The operation of the Town of Deseronto Water Pollution Control Plant went into full operation in the spring of 1972. The plant was operated in a very satisfactory manner by plant personnel. The water quality of the treated wastes was excellent and well below the objectives of the Ministry of the Environment.

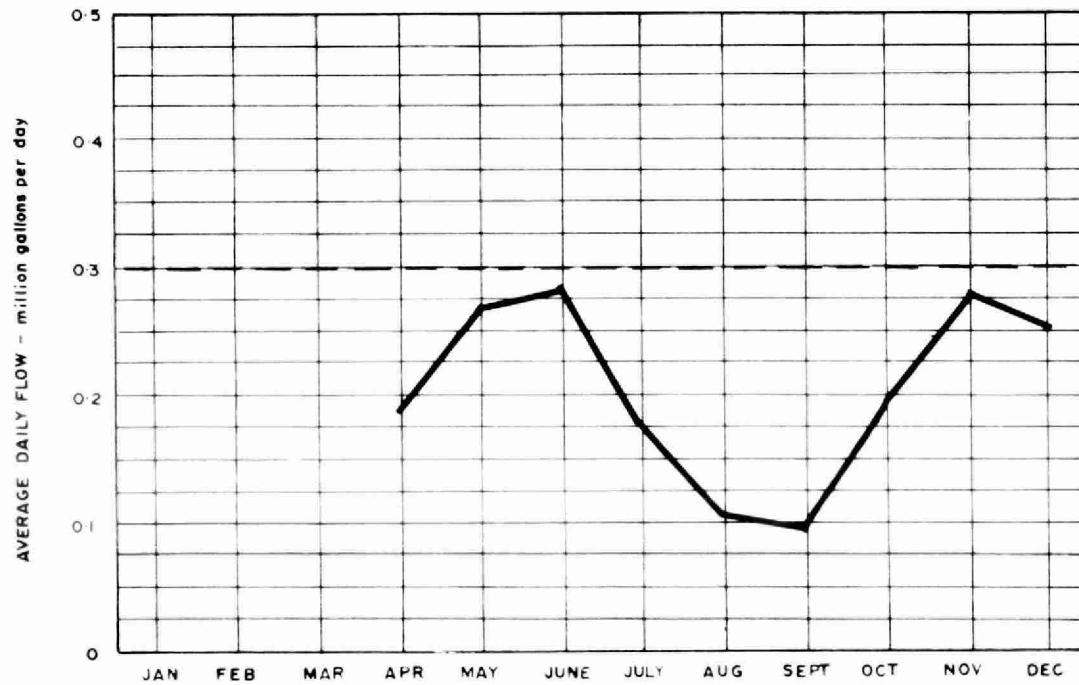
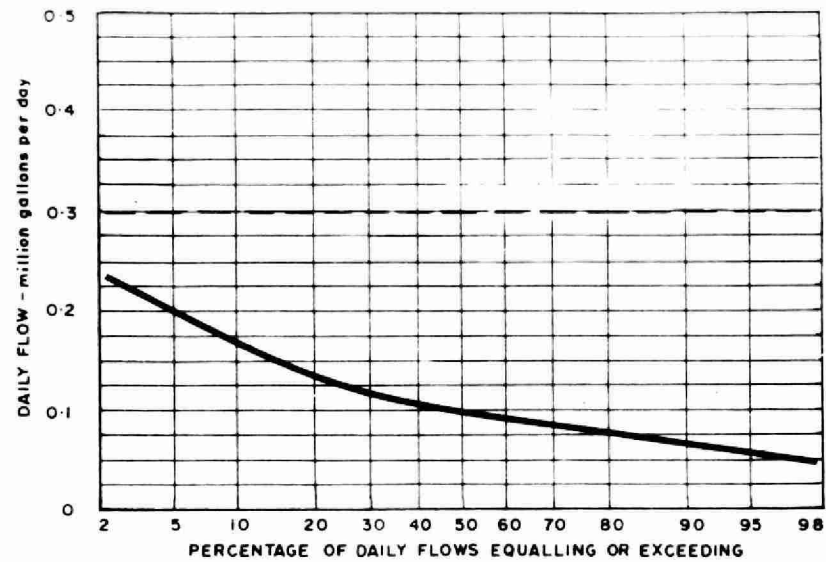
PLANT PERFORMANCE

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW	AVERAGE DAY	MAXIMUM DAY	INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT
	million gallons	mil. gal	mgd	mg/l	mg/l	%	10 ³ pounds	mg/l	mg/l	%	10 ³ pounds	mg/l P	mg/l P
JAN													
FEB													
MAR													
APR	4.05 *	.135	.168										
MAY	4.23	.136	.251	70	3	96	2.8	100	20	80	3.4	6	3.9
JUNE	3.74	.125	.264	190	1	99	7.1	190	5	97	6.9	11	5.6
JULY	3.11 *	.100	.165	120	2	98	3.4	160	10	94	4.7	10	7.1
AUG	2.07	.067	.107	110	4	96	2.2	215	12	94	4.2	12	7.0
SEPT	2.01	0.67	.090	280	3	99	5.6	900				40	
OCT	3.03	.098	.195	110	1	99	3.3	420	5	99	12.6	13	5.5
NOV	3.50	.117	.283	120	5	96	4.0	133	9	93	4.3	15	6.0
DEC	3.87	.125	240	220				300	5	98	11.4	12	5.1
TOTAL	29.61 **	-	-	-	-	-		-	-	-		-	-
AVG.		.108	MAXIMUM .283	153	3	98	4.1	264	10	96	6.8	15	5.7
No. of Samples	-	-	-	8	7	-	-	11	10	-	-	8	7

* Estimated flow

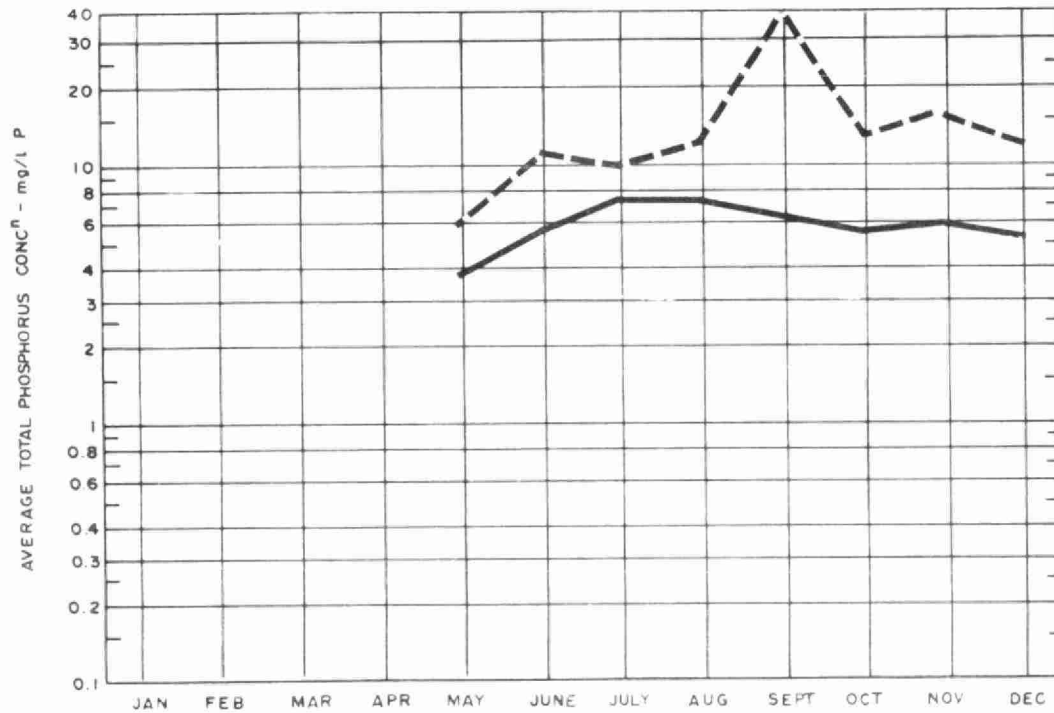
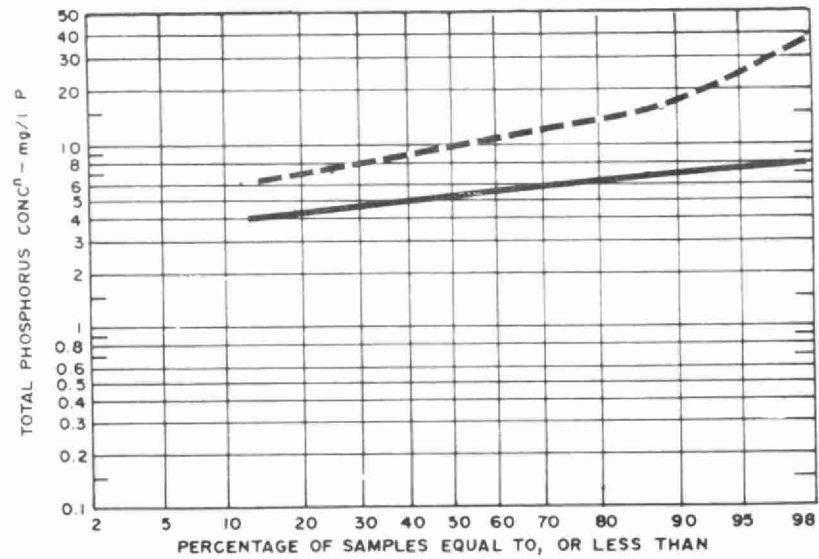
** 275 days flow est.

FLOWS

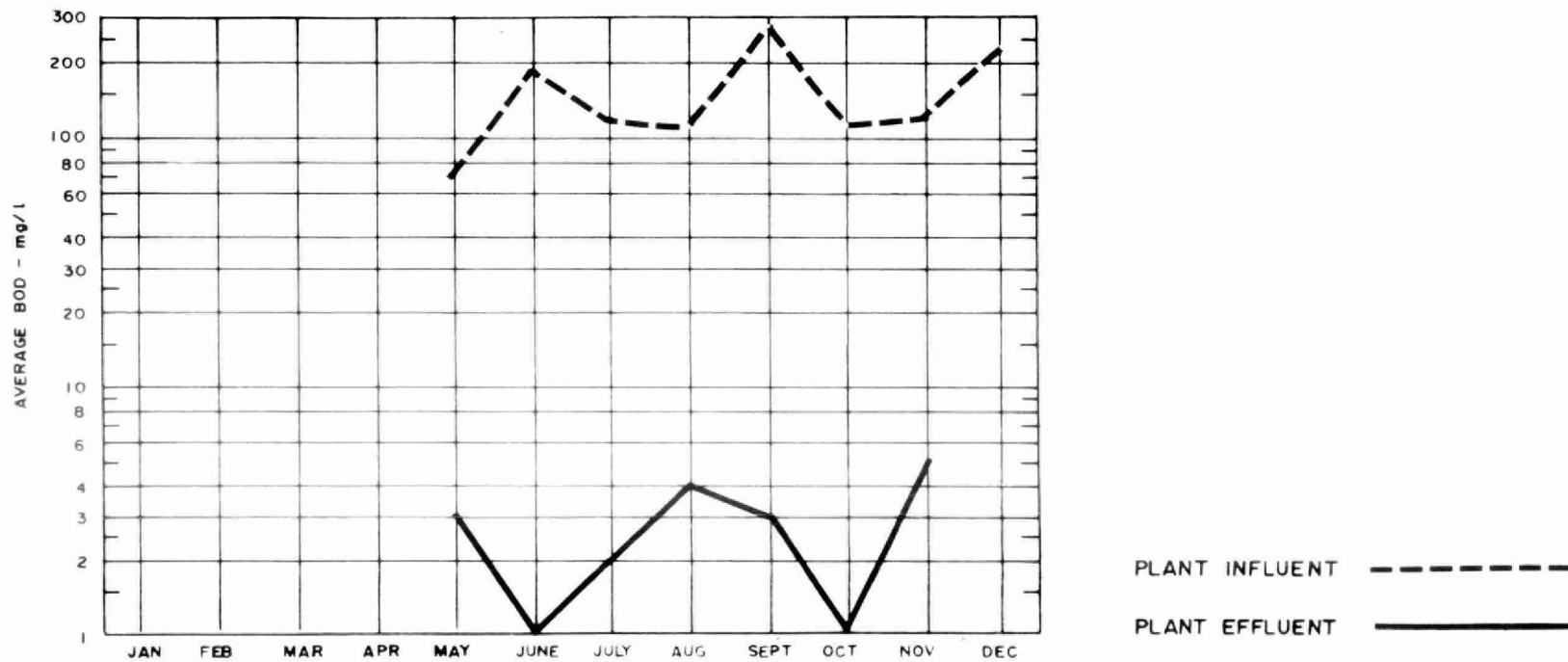
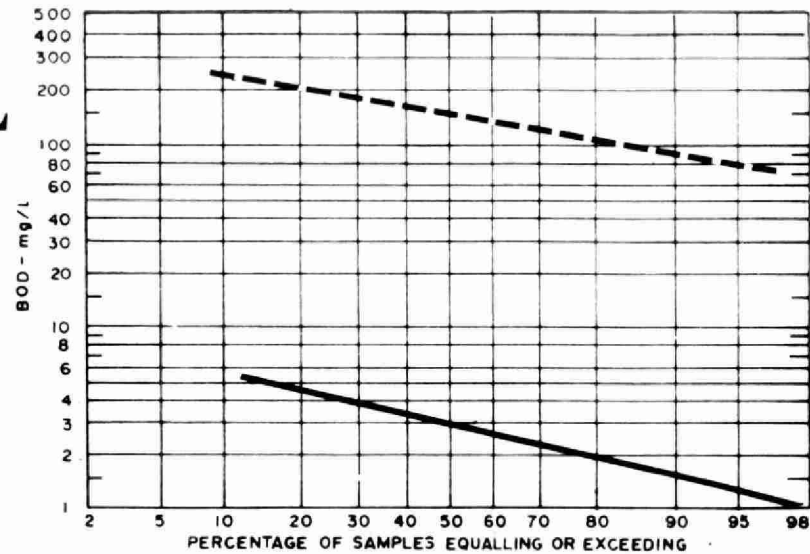


DESIGN CAPACITY — — — — —

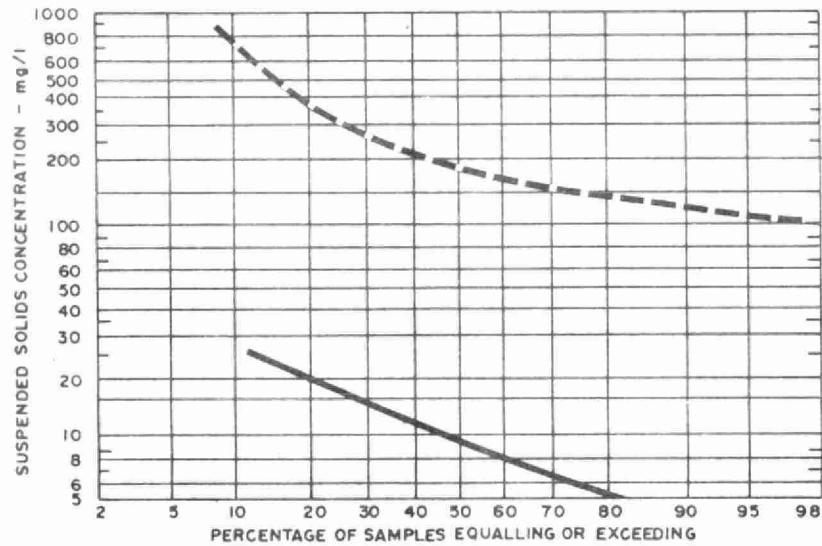
PHOSPHORUS



BIOCHEMICAL OXYGEN DEMAND

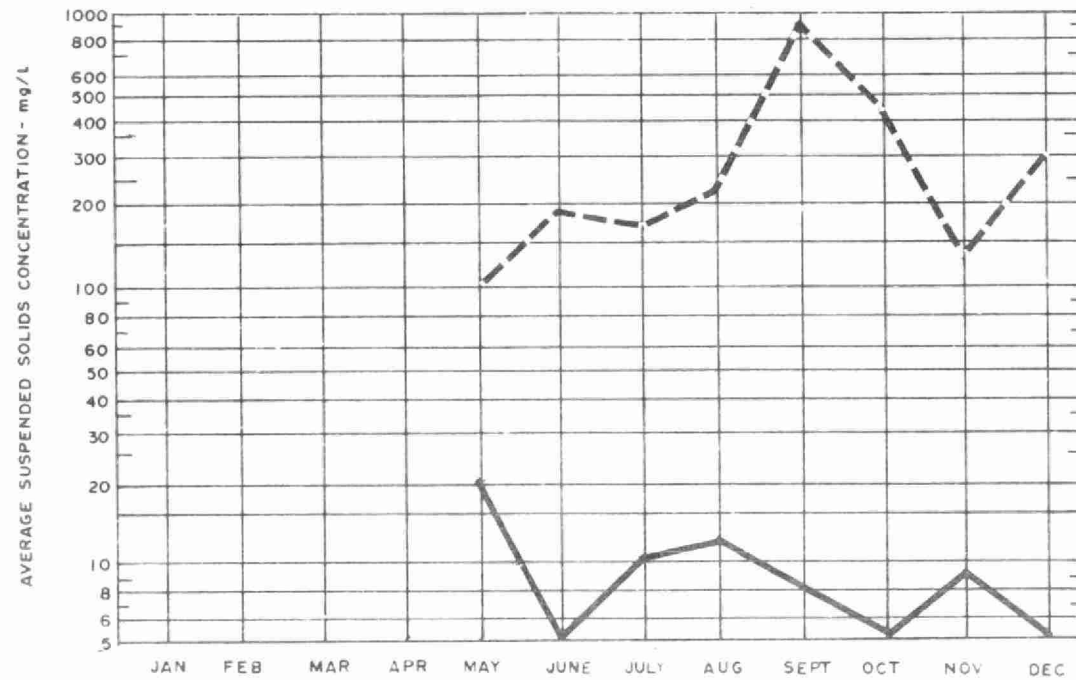


SUSPENDED SOLIDS



PLANT INFLUENT

PLANT EFFLUENT



TREATMENT DATA

MONTH	GRIT	CHLORINATION		AERATION			WASTE SLUDGE			AEROBIC DIGESTER			
	QUANTITY REMOVED	CL ₂ USED	AVG. DOSAGE	MLSS CONC	F/M	AIR USED	QUANTITY	SUSPENDED SOLIDS	VOL SOLIDS	QUANTITY REMOVED	SUSPENDED SOLIDS	VOL SOLIDS	AMOUNT HAULED
	cubic feet	10 ³ pounds	mg/l	mg/l	day ⁻¹	$\frac{1000 \text{ ft}}{\text{lb BOD}}$	10 gallons	mg/l	%	10 gallons	mg/l	%	cubic yards
JAN													
FEB													
MAR													
APR	1.5	71	3.6	4360									
MAY	1	121	4.2	4120	.02						90		
JUNE	0	151	4.6	5470	.03						2120	16	
JULY	1	141	5.2	7170	.01						1630	27	
AUG	1	169	8.1	3829	.01						4500		
SEPT	0	167	8.3	5650	.02						3860		
OCT	1	189	6.3	7400	.01						3960		
NOV	7	180	5.1	8110	.01						3960		
DEC	5	172	4.7	6300	.03						24900	45	
TOTAL	17.5	1361	-	-	-	-		-	-		-	-	
AVG	0.5 cu. ft/mil gal	151	5.6	5820	.02						5630	29	

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